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Abstract

Globalized labor markets confront many adults, both employed and unemployed, with demands arising from career uncertainty that have the potential to jeopardize occupational planning. This paper investigated how individuals in different regions of Germany, which are characterized by different economic opportunities, negotiate such demands in order to pursue a career. The central hypothesis is that under unfavorable economic conditions, disengagement from demands of career planning, in terms of reducing commitment to their mastery, will predict positive changes in subjective well-being. This was tested using a sample of $N = 806$ adults living in 91 regions of Germany. Results suggest that disengagement predicts increased subjective well-being, but only if individuals report a very high load of demands of career planning and live in regions characterized by particularly poor opportunities for goal striving. We conclude that disengagement can be an adaptive way of mastering occupational planning under particularly disadvantageous circumstances.

Keywords: career uncertainty; context; developmental regulation; disengagement; globalization; migration; occupational planning; satisfaction with life; secondary control;

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Rapid advances in information and communication technologies, political transformation in the countries of Central and Eastern Europe and the subsequent opening of new markets, as well as the economic boom in many Asian countries, particularly in China, have all led to increased international economic exchange and to a growing worldwide interconnectedness (e.g., Alasuutari, 2000; Held, McGrew, Goldblatt & Perraton, 2000). Characteristic of these global markets are an increase in the speed of innovation, accelerated social and economic change, accelerated market processes, as well as the rise of unpredictable market developments. All these translate into an increasing market uncertainty and to a greater need for flexibility on the part of companies and, consequently, on the part of employees (Hofäcker, Buchholz & Kurz, 2010). Together with a massive expansion of educational and occupational choice, these societal changes have affected the occupational life of individuals around the world, especially with regard to occupational planning (e.g., Brannen, Lewis, Nilsen & Smithson, 2002; Lecardi, 2005). By occupational planning, we mean the purposeful deliberation of types of career and career objectives, which of course includes the consideration of career opportunities and career barriers that define the subjective outcome expectancies for a given career goal.

A theoretical framework for the study of contextual change by Silbereisen (2005; Pinquart & Silbereisen, 2004) suggests that structural uncertainty at the societal level cascades through the various levels of contexts, which may or may not include the individual, to the very micro contexts of individual development, such as the work place or the family life. At the micro level, structural uncertainty is then manifested as individual *demands* representing a mismatch between what the individual expects and is prepared for, and the new requirements of the changed context. This mismatch disturbs habits, interrupts routines, makes previously learned behaviors obsolete, and requires new forms of adaptation

(Silbereisen, Pinquart & Tomasik, 2010; Tomasik & Silbereisen, 2009). Individuals who are challenged by many of such demands are at risk of overtaxing their personal and social resources and thus need to find adaptive responses for their satisfactory negotiation (Pinquart & Silbereisen, 2004). This notion of a cumulative effect of demands, i.e. the assumption that individuals can cope quite well with few demands, but that many put the person at risk for maladjustment, is based on models of the development of psychopathology (e.g., Sameroff, 2000).

In this paper, we want to demonstrate that, in particular circumstances, a useful response to the demands of uncertainty related to career planning is *not* to try to overcome them by putting in more effort, being more persistent, or seeking more information, but rather by quitting commitment and by disengaging. The factors we propose as the most important determinants for adaptive disengagement are the level of demands of career planning and the level of opportunities provided by the social ecology. The first factor addresses the issue of individuals' reserve capacities, because a cumulation of demands requires greater effort to adapt (Tomasik, Silbereisen & Pinquart, 2010) and thus increases the likelihood of failure and the risk for maladaptation (Pinquart & Silbereisen, 2004; see also Sameroff, 2000). This leads us to hypothesize that, when a high load of individual demands is accompanied by insufficient opportunities in terms of a return for invested effort, disengagement can be seen as more adaptive than engagement (see also Tomasik, Silbereisen & Heckhausen, 2010).

Contextual Influences on Occupational Planning in Adolescence and Adulthood

A number of empirical studies converge in the notion that, in the last 20 or 30 years, labor markets have become characterized by increasing uncertainty for men and women, and young and old alike. In Germany, which is a good example of this trend, social scientists have observed a decline in full employment, an increase in part-time or "marginal" part-time work (Allmendinger & Ebner, 2006), an increase in fixed term and temporary employment (Jahn, 2007), and more frequent and more distinct breaks in occupational biographies concerning

phases of unemployment and multiple work contracts (Dundler & Müller, 2006; Hirschenauer & Wiessner, 2006). Internationally comparative studies confirm that occupational uncertainty has affected all segments of the population (Hofäcker et al., 2010), and indeed one could argue that the developmental task of planning a career is no longer limited to adolescence or young adulthood, but that today it concerns individuals through all their adult life until retirement.

Career development is influenced by both objective and perceived environmental factors that offer opportunities and set constraints for the implementation of career related goals and projects (Lent, Brown & Hackett, 2000; Young, Valach & Collin, 2002). However, whereas objective factors, such as local unemployment rates, set the field for the implementation of occupational goals, the effects of an objective factor usually seem to depend, at least partly, on the way it is appraised and responded to by the individual (Vondracek, Lerner & Schulenberg, 1986). Thus, individual appraisal of the occupational "opportunity structures" (Astin, 1984) represents an important factor in individuals' career goals and aspirations. Hence, the line of reasoning in this paper is that an association exists between the way in which individuals negotiate the various demands of career planning, the result of the negotiation, and individuals' appraisal of occupational opportunities and constraints. More specifically, we want to focus on what Lent and colleagues (2000) have labeled "contextual barriers" that, via mediated paths, are supposed to have a negative influence on the outcome expectancies for occupational behavior and thus the way in which individuals deal with occupational demands. Although Lent and others typically formulated their theories with the career decision process of students in mind, there is no reason to assume that it does not hold for more advanced careers, particularly when these are characterized by frequent breaks and shifts. We thus want to use Lent's theory as a backdrop to argue that contexts can have a strong influence on vocational behavior in general and on how individuals deal with occupational uncertainty in particular. In the next section we will

review some specific responses to occupational uncertainty and then categorize them within a motivational psychological framework.

Individual Responses to Increased Occupational Uncertainty

Individual agency is bounded by the scope of action opportunities provided by the social ecology (e.g., Heckhausen, 1999) and these may either increase or decrease as a function of historical change. In the case of increasing opportunities (e.g., expansive labor market due to economic growth), individuals seize the opportunity and capitalize on it through effort and persistence. Bynner (2001), for instance, has described expedited life-course transitions, such as the entry into the labor market under favorable economic conditions: occupational planning may still be a challenge, but individuals are able to master this challenge from the more comfortable position of increasing choice resulting from economic growth. The scenario is quite different if action opportunities become restricted, for instance, in the course of a major economic downturn or higher competition within the labor market. There is also strong evidence that individuals respond to a combination of rapid social change and decreasing opportunities for individual agency by postponing life-course transitions (Hofäcker et al., 2010; Schoon, 2007). Such deferment of life-course transitions may be considered an adaptive reaction to decreasing opportunities. Other reactions observed when opportunities became less favorable were the formation of more flexible forms of intimate relationships that do not require long-term commitment or a shift from blocked developmental pathways to those with more favorable opportunities (Hofäcker et al., 2010). Young people, for instance, stay longer in education, which allows them to avoid the risk of unemployment and, at the same time, to improve their qualification for the labor market (Schoon, 2007). Such strategies of deferment are a prime example of temporary *disengagement* from important blocked developmental goals and of adjusting aspirations towards goals with more promising opportunity structures, where giving up can be more beneficial than persisting with something that is almost unattainable.

Propositions of the Motivational Theory of Life-Span Development

According to the *motivational theory of life-span development* (Heckhausen, 1999; Heckhausen, Wrosch & Schulz, 2010) successful development depends on the individual's ability to fine-tune goal engagement (i.e., selective primary, selective secondary, and compensatory promary control) and goal disengagement (i.e., compensatory secondary control) to the opportunities and constraints provided by the social ecology in order to maximize one's long-term capacity for control. The adaptive value of goal engagement and goal disengagement is fundamentally determined by the opportunities and constraints for primary control-striving provided by the social ecology (Heckhausen, 1999). If the social ecology provides sufficient opportunities, engagement is likely to pay off in terms of a successful solution of the task and allows individuals to maintain or even expand their capacity for primary control. Disengagement is not adequate, simply because it does not allow individuals to make use of their developmental potential. The opposite is true if the ecology does not offer sufficient opportunities to master demands. Under such circumstances, individuals who stay engaged and motivationally committed expose themselves to the repeated experience of failure. Strategies of disengagement are more adaptive and allow individuals to switch to more promising goals, thus maintaining their capacity for primary control. The individual who disengages from a futile goal saves resources that would otherwise be wasted.

There is substantial empirical evidence for the adaptive value of disengagement under constrained opportunities (see Heckhausen et al., 2010), although no research has yet focused specifically on constraints in the opportunities for occupational planning. Wrosch, Scheier, Miller, Schulz and Carver (2003), for instance, reported studies that examined the associations between goal disengagement and subjective well-being in parents of children with cancer, and in students who were asked to imagine themselves in situations where previous goals became unattainable. In both the parent and student samples, goal

disengagement explained significant proportions of variance in indicators of well-being. Other studies (for an overview, see also Heckhausen et al., 2010) investigated coping with uncontrollable demands during extreme life situations, such as caring for handicapped children (King, Scollon, Ramsey & Williams, 2000) or terminally ill patients (Moskowitz, Folkman, Collette & Vittinghoff, 1996) and coping with uncontrollable memory deficits (Williamson & Schulz, 1993) or the death of a loved one (Mattlin, Wethington & Kessler, 1990). Finally, Heckhausen, Wrosch and Fleeson (2001) demonstrated that staying committed to the goal of having a baby is associated with more depressive symptoms in women after menopause, and Wrosch and Heckhausen (1999) found that disengagement from the goal of finding a new partner after divorce in old age (i.e., when opportunities to do so are severely restricted) predicts positive changes in positive affect.

Although these studies were thematically and conceptually quite different, all lead to the same conclusion: even extreme stress does not have to result in lower subjective well-being and may eventually be turned into a growth experience if individuals manage to disengage from unattainable goals, aspirations, or ideals, and if they are able to protect their motivational and emotional resources. Staying committed to goals that are no longer appropriate, however, seems to obstruct the attainment of other goals from which individuals are then likely to derive emotional well-being and satisfaction.

Hypotheses

Our first hypothesis, which serves as a preparation for those that follow, states that a high load of demands of uncertainty related to career planning is associated with a negative (residual) change in subjective well-being over time. Until now, this association has only been studied with cross-sectional samples (e.g., Silbereisen & Tomasik, 2011b), but establishing a main effect of demands on longitudinal change in satisfaction with life is a prerequisite for our hypotheses related to the beneficial effects of disengagement. We want to test the first hypothesis with regard to general life-satisfaction, work life-satisfaction, and family life-

satisfaction. The domain specific measures are meant to reflect direct within-domain effects, which we expected to be particularly strong, as well as spill-over effects of career uncertainty to the domain of family, which have already been demonstrated in previous research (Larson, Wilson & Beley, 1994). As previous theorizing and research (e.g., Sameroff, 2000) suggest that associations between stressors and individual adaptation are not necessarily linear, but rather a cumulation of stressors that is detrimental to physical and mental health, we want to model a non-linear relationship between demands of occupational planning and measures of life-satisfaction.

Our following hypotheses state that disengagement from the demands of career planning is associated with an increase in subjective well-being if (and only if) the context does not provide sufficient opportunities for primary control. By context, we mean the region where an individual lives on a geographical level that represents a homogeneous economy and labor market. As will be described in more detail in the methods section, we measured opportunities for primary control in terms of net migration into that region. The second and central hypothesis of this paper hence is that individuals who face unfavorable opportunities for mastering a high load of demands of career planning in their region will increase in subjective well-being if they use compensatory secondary control to negotiate unattainable demands. In other words, strategies of disengagement are considered necessary for subjective well-being if the individual is confronted with a high load of demands and if, at the same time, the social ecology does not provide sufficient opportunities for primary control. This hypothesis suggests an interaction effect between compensatory secondary control strategies, demand load, and contextual data on opportunity structures. As the outcome variable, we wanted to predict (residual) changes in general life-satisfaction, which captures an overall evaluation of one's life (Diener, 1984), over the course of one year. If, as we assume, disengagement from unattainable demands facilitates engagement in alternative goals and domains, general life-satisfaction should be sensitive to success in these new goals and

domains. Concerning the cumulative effect of demands, we expected non-linear effects, whereby a high cumulation of demands should particularly contribute to the interaction effect. As mentioned in the introduction, this assumption was made against models of psychopathology that have identified a cumulation of stressors as a particular risk factor for maladjustment (see Sameroff, 2000).

In our third and fourth hypotheses, we expected that the beneficial effect of disengagement under conditions of high demands and low opportunities should be evident in domain-specific life-satisfaction in work and family life. The domain of work represents the domain of interest, so that we expected particularly strong effects due the proximity of the construct to the predictor variables. However, it is also the domain of life in which individuals have to admit having failed to master basic demands, which might severely attenuate life-satisfaction in the domain of work.

As previous research has demonstrated that work uncertainty substantially affects marital and family relationships (Larson et al., 1994), we expected positive spill-over effects into family life-satisfaction, so that the reduction of uncertainty, even if achieved by means of disengagement, should positively affect family satisfaction. In formulating our hypotheses, we are aware that persistence and endurance are valued virtues in Western societies, and that abandoning a goal often has the stigma of failure. This fact, however, would contribute to attenuating the expected effects so that it does not pose a threat to the internal validity of this study.

We examined our hypotheses with data from one younger and one older sample, aged 16 to 43, and 56 to 74 years, respectively, and collapsed the two samples for further analyses. Despite the resulting heterogeneity in the samples with regard to the career stage of the participants, we examined but did not expect age differences in the hypothesized processes when age is used as an indicator for career stage. For both younger and older individuals, a higher load of demands should be associated with decreased subjective well-being, and for

both younger and older individuals, disengagement should be beneficial when they are confronted with a high load of demands, but without the opportunity to engage with them. We have already outlined in the introduction that today's demands of career planning potentially affect younger and older adults alike, and we have no reason to assume that the basic mechanisms investigated here substantially differ across age. Of course, one could argue that younger people have more time and opportunities to deal with the demands of career uncertainty in the future (see Wrosch, Scheier, Miller, et al., 2003) so that disengagement should not have many negative consequences for them. However, it is also true that young people are least protected by seniority and other institutional settings, and that they do not have many backup assets, so that disengagement is particularly dangerous for them and might jeopardize their occupational future. Occupational planning is such a central developmental task for both younger and older adults that disengagement should only be beneficial under narrowly circumscribed circumstances but regardless of age.

Method

Procedure

The present study is based on two longitudinal samples from the *Jena Study on Social Change and Human Development* that were conjointly analyzed to test the hypotheses. The first sample consisted of $N = 606$ younger adults aged 16 to 43 years who were interviewed in 2005 and 2006. The second sample comprised $N = 200$ older adults aged 56 to 74 years who were interviewed in 2009 and 2010. Exactly the same sampling procedure was applied for both samples: Respondents were drawn in equal share from four German federal states that were selected to represent two economically wealthier (Thuringia and Baden-Wurttemberg) and two economically poorer regions (Mecklenburg-Western Pomerania and Schleswig-Holstein), with Thuringia and Mecklenburg-Western Pomerania being in the former East and Baden-Wurttemberg and Schleswig-Holstein in the West of Germany. In each sample, an almost identical number of inhabitants from each state were interviewed. For the selection of

participants, each state was split further into smaller “target areas”. Within each target area, sampling points were selected from the “ADM register,” which is representative for the German household population aged 14 and more years (cf. von der Heyde & Loeffler, 1993). Starting with these sampling points, interviewers followed a random route to identify households where they used the Kish (1949) grid to select appropriate participants.

The assessments were conducted as standardized face-to-face interviews by two professional survey institutes and lasted about 60 to 90 minutes. Participants were briefly introduced to the topic of the interview and then informed about regulations of data protection and their right to refuse to answer and to withdraw from participation at any point of the interview. After having given their consent, participants were read the various questions of the questionnaire and presented the different scales or answering alternatives. Most answers were given orally by the participant and then written down (younger cohort) or typed into a laptop computer (older cohort) by the interviewer. The only exception to this oral interview format was the assessment of control strategies with regard to work-related demands, family-related demands, and demands of public life. In order to avoid the interview situation becoming too artificial by the threefold repetition of the same items by the interviewer, control strategies were assessed in a paper-and-pencil mode. This procedure was retained at the second measurement occasion and, as a general rule, the same instruction and the same item wordings were used for the same variables. No compensation was paid to the participants at any time.

Sample

When reviewing the characteristics of the two samples in the next sections, we will report descriptive statistics for the longitudinal sample that, compared to the initial sample, is reduced in size by design (due to financial constraints, we did not aim at recruiting all participants from the initial samples for a follow-up interview but rather defined a number of follow-up interviews we wanted to accomplish) and because of sample attrition. Results

published elsewhere (Silbereisen & Tomasik, 2011b) suggest that the initial sample was representative for the German population from the four federal states in terms of basic socio-demographical variables.

The initial sample of younger adults interviewed in 2005 comprised $N = 2863$ participants, of which $N = 1296$ agreed to be contacted again to participate in a follow-up interview. Almost all of these participants were approached one year later and $N = 606$ completed the follow-up interview, thereby constituting the longitudinal sample. This comprised more women (59.6%) than men (40.4%) and was aged $M = 32.38$ years ($SD = 8.25$) at the first measurement. About half of the sample (50.2%) had graduated from or was currently attending high school. One quarter (24.6%) was in or had completed the compulsory years of schooling, and another quarter (25.3%) was in or had attended college-bound education. With regard to status, at the first measurement 48.3% of the participants were single, 42.8% were married, 8.6% were divorced, and 0.3% were widowed. More than half of the sample (57.6%) reported having own children, and where this was the case, the number of children averaged to $M = 1.91$ ($SD = .93$). Almost half of the sample (52.0%) was in gainful employment and worked on average $M = 35.07$ ($SD = 13.01$) hours per week. If participants were not in gainful employment (48%), they were either still in education (36.1%), unemployed (36.8%), homemakers (13.7%), on maternity leave (10.0%), or not employed for other reasons (3.4%).

The initial sample of older adults was interviewed in 2009 and from the very beginning we excluded from the analyses all participants who were retired, were not in gainful employment, or were not looking for work ($N = 525$). In this sample, $N = 393$ participants agreed to participate in a follow-up interview and of these $N = 200$ have completed the follow-up interview and thus represent the longitudinal sample. The longitudinal sample comprised an equal share of 100 women and men, respectively, and the participants' age was $M = 60.42$ years ($SD = 4.03$) at the first measurement. One third of the

sample (32.0%) had attended compulsory school, 39.0% had attended high school, and 28.0% of the longitudinal sample had attended college-bound education. More than half of the sample (64.0%) was married at the first measurement. Another 14.5% were divorced, 13.5% were not married, and 8.0% were widowed. The vast majority (89.5%) reported having own children; on average = 2.03 (*SD* = .94). More than half of the sample (62.5%) was in gainful employment. Where participants were not in gainful employment (37%), they were unemployed (43.2%), homemakers (18.9%), disabled or permanently incapacitated for work (16.2%), and retired (5.4%) or not employed for other reasons (16.2%).

Longitudinal Attrition Analysis

We compared those who participated in the follow-up with those dropped out but could have participated according to our criteria (including those who refused further participation already at baseline). In the younger sample, there were no significant differences concerning participants' education ($p = .29$), employment status ($p = .06$), occupational planning demands ($p = .36$), and general life-satisfaction ($p = .21$). However, we found that follow-up participants were on average older, $t(2857) = 3.63$, $p < .01$, more likely to be female, $t(2857) = 3.08$, $p < .01$, less likely to disengage from occupational planning demands, $t(2857) = 4.14$, $p < .01$, were less satisfied with their work life, $t(2857) = 2.15$, $p < .05$, but more satisfied with their family life, $t(2857) = 3.01$, $p < .01$.

In the older sample, we found no significant differences concerning participants' age ($p = .28$), gender ($p = .05$), education ($p = 1.00$), occupational planning demands ($p = .97$), satisfaction with life ($p = .71$), work ($p = .18$), and family life ($p = .55$). However, follow-up participants were slightly more likely to be homemakers, disabled or permanently incapacitated for work, retired or not employed for other reasons, $\chi^2(2) = 9.12$, $p < .05$, and more likely to report lower compensatory secondary control, $t(523) = 2.82$, $p < .01$, compared to those who dropped out.

In sum, the only systematic selectivity effect across the two samples was that follow-

up participants reported less disengagement compared to participants who dropped out after the baseline assessment. This effect can be seen as a reflection of the process for which disengagement actually stands. Individuals who more strongly endorsed that they would "put the problem to the back of their mind" when confronted with were in the following more likely to refuse participating in a study which confronts them with the problem itself.

Measures

Satisfaction with Life. Satisfaction with life, which is an important aspect of subjective well-being, represents its cognitive and evaluative dimension (Diener, 1984), and is responsive to current situational factors, such as critical life events (Stallings, Dunham, Gatz, Baker & Bengtson, 1997) was chosen as an indicator for subjective well-being. There is also support for the suggestion that life-satisfaction reflects current societal living conditions, as well as the potentiality to change them for the better in terms of access to power (Tesch-Römer, Motel-Klingebiel & Tomasik, 2008). All of this made it a promising and interesting variable for the current investigation.

Satisfaction with life was measured with regard to life in general, as well as with regard to work and family life. Respondents were asked "How satisfied are you at present with your life altogether", "How satisfied are you with life in your family?", and "How satisfied are you with your work, education or training?" The answer scale ranged from 1 ("very dissatisfied") to 7 ("very satisfied"). Single item measures of life-satisfaction are quite common and proved sufficiently reliable and valid measures of the underlying construct (Campbell, Converse & Rodgers, 1976). On average, participants were very or quite satisfied with their lives in general (M = 4.98; SD = 1.31 at baseline; M = 5.06; SD = 1.32 at follow-up), with their work (M = 4.62; SD = 1.79 at baseline; M = 4.77; SD = 1.71 at follow-up), and particularly with their family life (M = 5.65; SD = 1.41 at baseline; M = 5.56; SD = 1.46 at follow-up).

Demands of Uncertainty Related to Career Planning. Four demands representing

increased uncertainty concerning occupational planning were assessed. All were prompted by "When considering the past five years…" in order to capture negative changes over time in this micro-context and thus to reflect a threat to self-continuity and self-image (see Keyes, 2006). The topics assessed were "…the risk of losing my job has increased", "…my career plans were often hindered by unforeseen events and circumstances", "…it is now more likely that I will be forced to accept a job that requires lower qualifications than those I hold", "…there are currently fewer job opportunities for me". Participants were asked to rate their endorsements of these statements on a scale from 1 ("does not apply at all") to 7 ("fully applies"). Based on the four items, we computed a composite index by counting all demands that were highly endorsed, as indicated by a scale value of 6 or 7. The formation of such an index was made against the backdrop of earlier research that provided the *cumulation* of stressors as the actual risk factor for psychosocial development (e.g., Sameroff, 2000).

The load of demands was uniformly distributed with slightly more zero highly endorsed demands compared to the others; participants on average reported $M = 1.77$ ($SD = 1.50$) highly endorsed demands. Further details on this measure are provided by Tomasik and Silbereisen (2009; Silbereisen & Tomasik, 2011b). Silbereisen and Tomasik (2011a) demonstrated that the very same items may be used across younger and older participants as they have very similar correlations with other variables and constructs.

Compensatory Secondary Control/Disengagement. A newly developed scale (see Tomasik, Silbereisen & Pinquart, 2010) was used to assess control strategies for mastering demands of social change based on the motivational theory of life-span development (Heckhausen et al., 2010). In the otherwise oral interview, control strategies were assessed with a questionnaire given to the participants immediately after the assessment of demands. The scale comprised items addressing selective primary, selective secondary, compensatory primary, and compensatory secondary control, of which only items addressing compensatory secondary control were used here. The items specifically referring to disengagement from

demands were, “If I can’t find a solution then I put the problem to the back of my mind”, “If nothing works out then I no longer take the whole thing seriously”, and “If I can’t handle these changes at all then I don’t concern myself with them any longer”. These items represent general strategies of how individuals habitually deal with demands. Participants were asked to rate these items on a scale ranging from 1 (does not apply at all) to 7 (fully applies). The psychometric quality of the scale was confirmed by Tomasik and colleagues in latent measurement models that, according to the work of Raykov (1997), indicated a high measurement reliability of $\rho = .95$. In the present sample, we obtained an internal consistency of $\rho = .79$ and used the average of the three items ($M = 2.80$; $SD = 1.40$) for the following analyses.

Opportunity Structures. Hypotheses 2 and 3 state that disengagement from the demands of career planning is associated with an increase in subjective well-being if the context does not provide sufficient opportunities for primary control. In order to capture regional differences in the structural uncertainty of the labor markets and thereby differences in opportunities to master the demands of career planning, we used the *net regional migration rate:* this is a simple yet powerful indicator often used in the economic, sociological, and political sciences (e.g., Cebula & Alexander, 2006). It relates rates of immigration and emigration to and from a region to the region’s average population size, thus representing what is sometimes called, “voting with one’s feet” (Tullock, 1971).

Regional net internal migration rates were obtained from the Federal Office for Building and Regional Planning at the level of NUTS-3 administrative districts (“Landkreise” and “kreisfreie Städte”). A reason for the choice of this level of analysis was that these regions represent the smallest units of legislative self-administration in the federal system of Germany so that there is virtually no variance in labor market or social policies within these regions. Furthermore, regional economics suggest that even in times of globalization (or maybe, because of globalization) such regions represent sufficiently homogeneous clusters in

economic terms. The net migration rate was computed as the difference of immigrants and emigrants in a region divided per 1,000 inhabitants: positive values indicate net immigration. The most recent figure available concerning the net migration rate was for 2003, but net migration tends to show high stability over time.

In our sample of regions, the rate ranged from -1.54 (urban district of Suhl in Thuringia) to +1.17 (urban district of Baden-Baden in Baden-Wurttemberg) with a mean around zero. The net migration rate was positively correlated with, for instance, the average personal and household income in a region (r = .57 and r = .66, respectively), the actual employment rate (r = .26) as well as its increase over the last eight years (r = .70). Thus, more people emigrated from a region if the economic situation deteriorated over the last years. Migration was also negatively correlated with the regional unemployment rate (r = -.61), the proportion of long-term unemployed in all unemployed (r = -.62), and public debt per capita (r = -.38). In sum, net regional migration rate seems to be a reliable representation of regional opportunity structures and a good indicator for the level of structural social and economic uncertainty of a region. It can thus be considered an important factor that determines the effectiveness of primary control striving with regard to occupational planning. Investing time and effort in order to advance one's career, for instance, only pays off if the local economy provides enough opportunities to do so. Otherwise, primary control striving is likely to result in failure. Comparing regions varying in the net migration rate thus offers the possibility to test the proposition that engagement and disengagement are linked with different outcomes as the function of varying opportunities and constraints in the social ecology.

Results

All calculations were conducted with the statistical programming language R (R Development Core Team, 2006) which is an open-source equivalent to S-PLUS. Full information maximum likelihood has been used as the optimization algorithm for fitting the model parameters to the data. In order to account for the grouped structure of the data, a set of

mixed-effects models was computed using the *nlme*-library by Pinheiro, Bates, DebRoy and Sarkar (2006). For each of the three response variables (general life-satisfaction, work life-satisfaction, family life-satisfaction, all measured at follow-up) one stand-alone model was parametrized. Each model was set up by sequentially including intercept, variance components, main effects, as well as the two-way and three-way interaction terms. Model 0 comprised only the intercept. In Model 1, satisfaction with life at baseline was entered so that the remaining variance to be predicted by all other variables and their interactions was the residual change of satisfaction with life over a period of one year. In Model 2, demands of career planning and disengagement were added. In order to detect non-linear effects of the demands, we entered a set of polynomial contrasts, instead of the raw variable, into the equation. In Model 3, we added the two-way interaction terms between disengagement and the contrast variables for demands of career planning. In Model 4, the internal net migration rate as the contextual predictor was added, and in Model 5 we included all cross-level interaction terms between contextual level migration rate and the two individual level variables representing demand load and disengagement. Finally, in Model 6 we included the three-way interaction between migration rate, demands, and disengagement. A significant three-way interaction indicated a confirmation of our central hypothesis.

Both samples were analyzed together as we had no hypotheses of possible age effects between the younger and the older cohort. The intra-class correlations (ICC) were ρ = for general life-satisfaction, ρ = .09 for work life-satisfaction, and ρ = .08 for family life-satisfaction indicating a very low clustering of satisfaction with life as a function of the region. We checked the correlations between the predictor variables in order to rule out possible problems of multicollinearity. It turned out, however, that the predictors were only weakly correlated. Demands of career planning were negatively associated with compensatory secondary control (r = -.08) and net internal migration rate (r = -.21); compensatory secondary control and net internal migration rate were positively correlated (r = .13).

General Life-Satisfaction

The coefficients of the model for general life-satisfaction are presented in Table 1. General life-satisfaction measured at baseline was, as expected, substantially associated with satisfaction with life measured at follow-up (B = .46; see Model 1). Furthermore, we can see that demands of career planning had a linear negative effect on the residual change in general satisfaction with life (B = -.24), indicating that a higher load of demands is longitudinally associated with a decrease in general life-satisfaction; this supports our first hypothesis (see Model 2). Neither disengagement nor the interaction between disengagement and demands, however, were significant predictors of change in satisfaction with life (see Models 2 and 3). Similarly, the migration rate did not predict general life-satisfaction, neither as a main effect (see Model 4) nor in interaction with the individual level variables (see Model 5). However, the three-way interaction between the quadratic component of demands, disengagement, and migration rate was significantly associated with change in general life-satisfaction (B = -.30), which confirms our second and central hypothesis (see Model 6). The incremental variance explained by including the cross-level interactions was ΔR^2 = .011.

// Table 1 about here //

In order to interpret the quadratic interaction effect, we performed post-hoc analyses, which revealed this effect could be attributed to the group of participants who had highly endorsed all four demands of career planning, as opposed to those who had only highly endorsed three or less demands. Hence, it was confrontation with all four demands – namely current job uncertainty, few prospects on the labor market, the threat of downward social mobility, and "random shocks" making career planning unpredictable – that provided the beneficial effect of disengagement under unfavorable contextual conditions. This association is depicted in Figure 1, which shows conditional plots representing the association between the two-way interaction of disengagement and migration rate on the one hand and satisfaction with life on the other. As the influence of life-satisfaction at baseline was already partialed out

in Model 1, values at the Y-axis represent the unstandardized change scores of general life-satisfaction. The first conditional plot represents the two-way interaction for participants with less than four highly endorsed demands of career planning. There is no significant association between disengagement and change in general life-satisfaction. The second conditional plot represents the very same two-way interaction for participants who have highly endorsed all four demands. For the purpose of illustration, the plot was divided into three parts representing different levels of net migration. The left regression line shows the association between disengagement and change in general life-satisfaction for the one third of participants living in regions with the most negative migration rate. The regression line in the center shows the same association for participants living in regions with an average migration rate, and the right regression line shows the association for the one third of participants living in regions with the most positive migration rate. For participants living in regions with high emigration, the association between disengagement and change in general satisfaction life-satisfaction is very positive, indicating that disengagement is associated with an *increase* in satisfaction with life. In other words, disengagement from many demands of career planning under the contextual condition of an unfavorable economic opportunity structures pays off in terms of higher general satisfaction with life over the course of one year. The opposite is true for participants living in regions with high immigration or favorable economic opportunities where the association between disengagement and change in satisfaction with life is slightly negative.

Domain-Specific Satisfaction with Life

The results for work life-satisfaction, presented in Table 2, differed from those obtained for general life-satisfaction. Although we found a significant linear main effect of demands on work life-satisfaction in confirmation of our first hypothesis (B = -.38; see Model 2), the three-way interaction expected to confirm our third hypothesis was not significant (see Model 6). We therefore had to reject Hypothesis 3 in relation to work life-satisfaction.

Concerning family life-satisfaction, the results (see Table 3) again look different. First, we found no main effect of demands of career planning on change in family life-satisfaction (see Model 2), which militates against a spill-over effect of demands related to occupational planning into the sphere of family, as set out in Hypothesis 1. However, there is evidence that a more positive migration rate is associated with a decrease of family life-satisfaction, a finding we had not expected. Finally, although there is no significant three-way interaction between the load of demands, disengagement, and the regional migration rate (see Model 6), there is a substantial two-way interaction between disengagement and migration rate (B = -.16; see Model 5). This association, which explains ΔR^2 = .005 of variance, is depicted in Figure 2. Although there is no beneficial effect of disengagement for regions with a negative migration rate, there is a detrimental effect of disengagement for those who live in regions characterized by positive migration and thus by prosperity. Not seizing the opportunities available but rather disengaging predicts a decrease in family life-satisfaction at all levels of demand load.

// Tables 2 and 3 about here! //

Probing Age Effects

Although not directly related to any of our hypotheses, we performed exploratory analyses to find out whether there is a differential association of the benefits of disengagement for different age groups. Neither splitting the sample into different age groups nor adding a four-way interaction term on top of Models 6 indicated the presence of an age effect. We thus concluded that the effects found are robust for the entire age range investigated.

Discussion

In the present study, we used longitudinal data on younger and older adults from different regions of Germany to test the hypotheses that confrontation with cumulated demands of career planning is associated with declines in satisfaction with life (Hypothesis 1)

and, more importantly, that disengagement from such demands is associated with an increase in life-satisfaction, providing that the individual is confronted with a high demand load and lives in a region offering few opportunities to pursue a regular career (Hypotheses 2-4). We found mixed empirical support for Hypothesis 1 concerning a main effect of demands of career planning on satisfaction with life. Although a higher load of demands of career planning predicted a decrease in general life-satisfaction and in work life-satisfaction, there was no significant main effect for satisfaction with family life. It could be that such spill-over effects do not exist in the context of the German welfare state which offers quite a generous protection for families and thus partly inoculates it from such negative effects.

The analyses offered strong support for our further hypotheses concerning the beneficial effects of disengagement, especially if one considers the fact that higher order statistical interactions – and in particular those describing cross-level effects between individual agency and structure – are generally difficult to find in unselected samples and even more difficult to replicate (see Cohen, Cohen, West & Aiken, 2003; McClelland & Judd, 1993). Despite this difficulty, and as predicted, we found that disengagement from demands of career planning pays off in terms of increased general satisfaction with life when individuals are confronted with an atypically high load of such demands and live in regions characterized by high emigration and associated unfavorable economic conditions. Our interpretation is that structural uncertainty in these regions has set up contextual barriers that made the pursuit of occupational goals a futile endeavor and prevented an active mastery of demands related to occupational planning. The fact that this psychological mechanism even seems to work with regard to demands that are so central to adult development is a strong support for contemporary notions of developmental regulation on which this study is based. The fact that it seems to work only when individuals are confronted with all four demands of occupational planning supports the notion of Sameroff (2000) and others who argue that a few stressors can be dealt with routinely, whereas too many stressors can overburden the

individual's reserve capacities and make unusual means of adaptation necessary.

Note that, against expectations, we did not find any indication of a beneficial effect of disengagement from unattainable demands of career planning when change in work life-satisfaction was investigated as the dependent variable. As we have investigated demands from the very same domain of life, this finding seemed somewhat paradoxical at the first glance. This finding might be explained by the notion that disengagement is not only associated with benefits but also with psychological "costs" that become apparent within the domain disengagement took place as disengagement does not correspond to the cultural preference for an agentic strategy of coping with life's central demands and thus provokes negative emotional reactions, such as regret in the individual (e.g., Carver & Scheier, 1986) and is particularly prone to formal and informal social sanctions (e.g., Heckhausen, 1999).

Although we did not expect age differences, we want to stress that the beneficial effects of disengagement indeed seemed to apply to the entire age range investigated. This finding implies that demands of career uncertainty function equivalently for younger and older adults and capture uncertainty with regard to the own career at different career stages. Of course, the social contexts in which the demands are negotiated are different for, say, a 20 year old student and a 50 year old unemployed person, but our findings suggest that the *basic mechanism* of engagement and disengagement with the demands does not differ dramatically. This finding is in line with research supporting the notion of a relative stability of the coping process throughout adulthood (e.g., Aldwin, 1991; Irion & Blanchard-Fields, 1987; Labouvie-Vief, Harkim-Larson & Hobart, 1987).

Limitations

This study has addressed a basic question concerning an often neglected aspect of human agency and has done so taking into account social ecology as a determinant for the adaptive value of individual behavior. Despite its strengths in sampling and design, the study has some methodological limitations. First of all, generalizability is restricted to the age range

investigated and cannot be inferred for individuals in mid-working life, say between 40 and 55 years. This, however, is a theoretically highly interesting segment of the population which, according to Hofäcker et al. (2010), is least affected by globalization and most protected by institutions of welfare, especially in the case of men.

Also somewhat problematic is the fact that the two samples were not assessed at the same time but almost five years apart, during which time a major world-wide economic recession occurred that could possibly have made the demands assessed more salient for the older than for the younger sample. Although we have not found any main or interaction effects of age, we cannot strictly distinguish between age and period effects in our design and this confounding renders a clear interpretation difficult. However, there is now evidence that, although the financial crisis of 2008/09 had an enormous impact on gross national products and labor markets world–wide and produced much uncertainty in individuals, its actual effect on the German labor market was rather limited due to strong protection by the welfare system (see Bechmann, Dahms, Fischer, Frei & Leber, 2010). This means we should not overestimate the period effects here.

Future Directions

Further research is necessary for a broader understanding of the predictors, processes, and outcomes of disengagement. In terms of predictors of who will persist in engaging with a seemingly unattainable challenge and who will be able to disengage, studies in ecologically valid settings and/or developmentally informed intervention studies are needed. They could focus on concepts describing flexibility in the use of control strategies, on traits that buffer the negative impact of failure on self-evaluation, and on personality characteristics related to optimism and the delay of gratification. In the context of research on career development, one might think more specifically about previous individual experiences of occupational uncertainty and how they were solved, especially as these represent the learning experiences that influence self-efficacy and outcome expectations when negotiating current contextual

barriers (Lent et al., 2000).

Concerning the mediation processes that link disengagement with subjective well-being, one can distinguish between those that help prevent repeated experiences of failure in an unfavorable ecology and those that enable success in the accomplishment of alternative goals after disengagement. The former are might be related to cognitive processes, such as shifting of attention or downgrading the importance of goals. To identify and to investigate such processes is a great challenge for future research as they may represent both strategic and conscious behaviors as well as automatic and sometimes unconscious reactions to blocked opportunities (see Brandtstädter & Rothermund, 2002). Although the studies by Brandtstädter and colleagues provide some ideas about processes that represent the mediation mechanisms, we are not aware of any longitudinal study that has tested several of such mechanisms simultaneously in order to uncover their dynamics over time.

Conclusion

The empirical findings presented in this paper strongly support the notion that subjective well-being can sometimes be achieved by an adaptation of goals and preferences to situational constraints (Brandtstädter & Rothermund, 2002; Heckhausen, 1999; Heckhausen et al. 2010). Under the present conditions of social change, where uncertainty and complexity become critical parameters for negotiating the life course, knowing when to let go represents an affordance individuals are increasingly confronted with in various developmental contexts (see Brandtstädter, 2010; Silbereisen et al., 2010). This makes it necessary for research on career development to put a more explicit focus on the context in which career decisions and implementations take place, and to consider breaks and deviations in individual careers as possible reflections of an adaptive adjustment to barriers and dead-ends in the social ecology. Our findings are also highly relevant for career counseling as they suggest that a tenacious striving to reduce career uncertainty may not always be worthwhile. Career counseling today should also provide its clients with skills necessary to analyze their situation, to ascertain

what can and can not be accomplished, to engage with or disengage from uncertainty, and finally, to strive for goals that are possible and to abandon futile struggles with goals that are not.

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Figure 1a. Conditional plot of the interaction between compensatory secondary control and net internal migration rate for the prediction of general life-satisfaction in the sub-sample of participants with *less than four* highly endorsed demands.

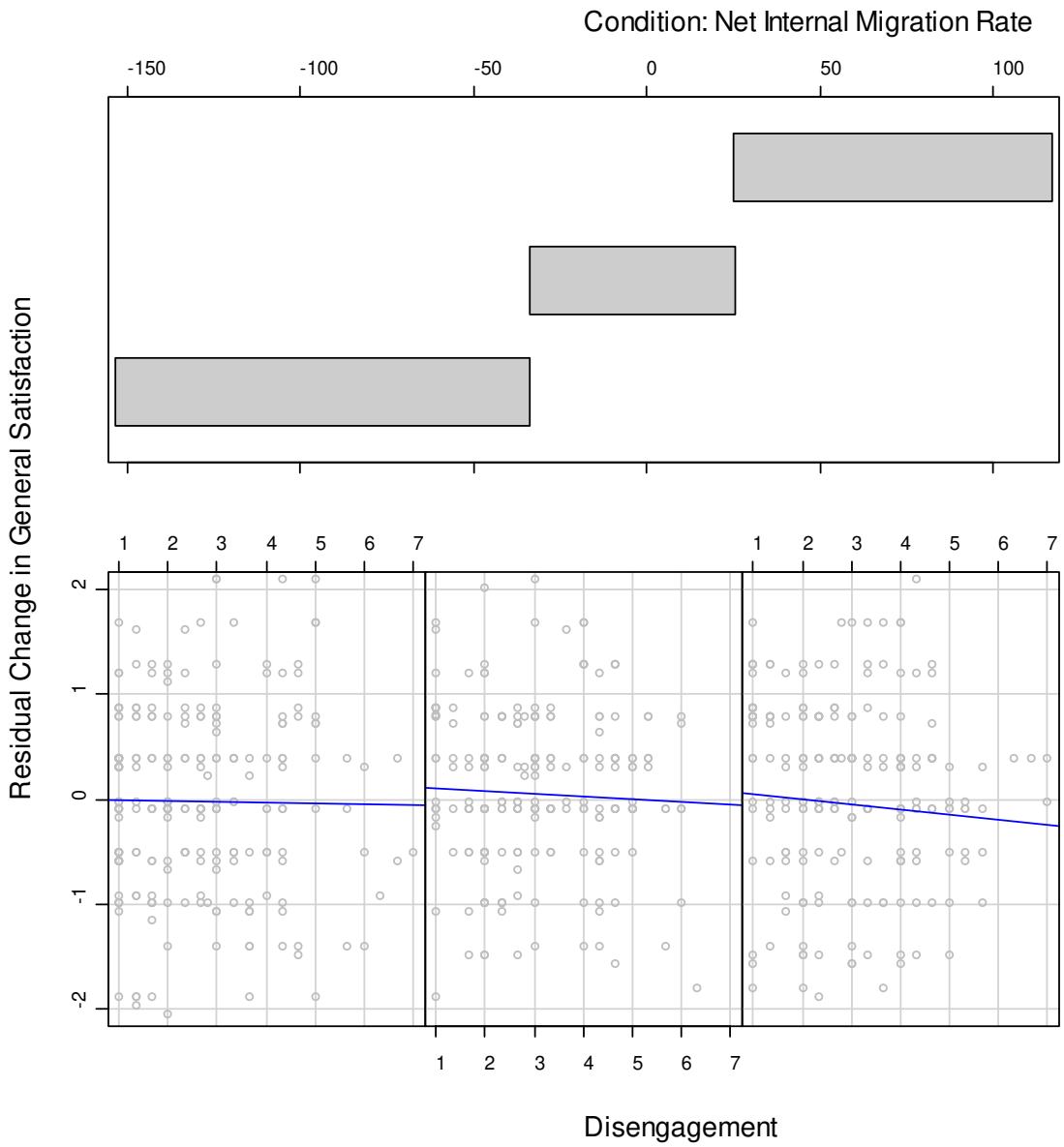

Figure 1b. Conditional plot of the interaction between compensatory secondary control and net internal migration rate for the prediction of general life-satisfaction in the sub-sample of participants with *exactly four* highly endorsed demands.

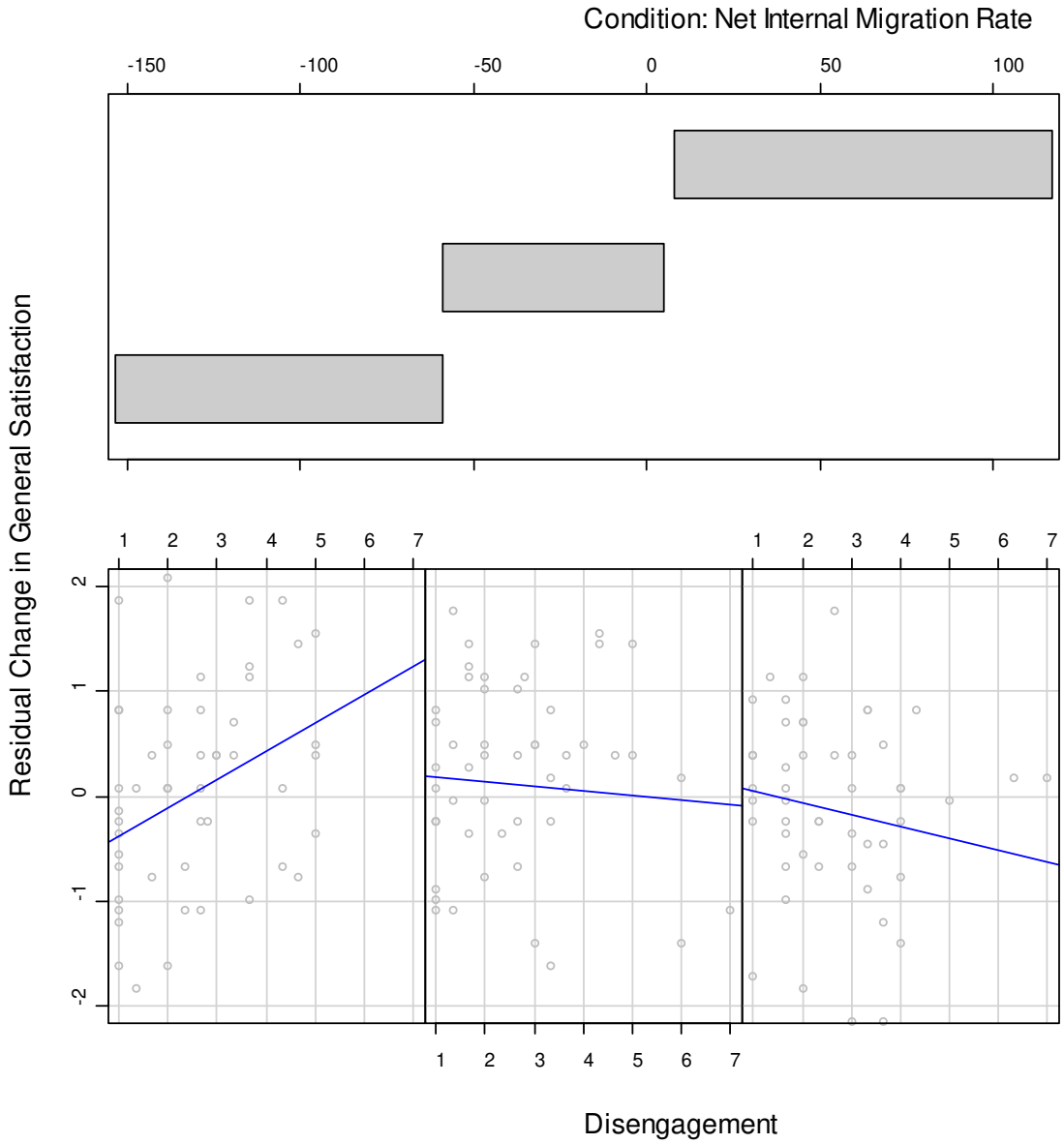

Figure 2. Conditional plot of the interaction between compensatory secondary control and net internal migration rate for the prediction of family life-satisfaction.